

## REMARKS

Receipt of the Office Action of July 2, 2009 is gratefully acknowledged.

Claims 16 - 31 have been re-examined and finally rejected over Dreyer in view of Frick. This rejection is respectfully traversed.

Claims 16 - 31 have not been further amended as they are believed to distinguish over the Dreyer and Frick combination of references.

Request for reconsideration of the final rejection is respectfully requested in view of the following.

(1)

Claims 16 - 31 are directed to a **modular** measuring device. A modular device is one that is created independently and then used in a larger system. See the attached Wikipedea definition of Modular design.

The present invention includes a sensor module and an electronics module. Both separately designed. Dreyer does not, contrary to the view of the examiner disclose a modular design as this concept is understood. The examiner suggests that element 2 of Dreyer corresponds to a "sensor module." Dreyer refers to element 2 as a "sensor." He never refers to sensor 2 as a module. The reference number 2 refers to the entire assembly shown in Fig. 1 not to part of it, so that element 13 cannot also be a modular part of 2. The point is that Dreyer does not disclose a modular design, and referring to various parts of the assembly shown in Dreyer does not make it a modular design.

(2)

The examiner suggests that Frick discloses a straight groove, presumably element 107. But element 107 is a thread not a groove, as groove is understood. Elements 107 and 109 of Frick are in reality a threaded connection. The examiner is taking liberties with the Dreyer and Frick references which are not justified by any reasonable use of language..

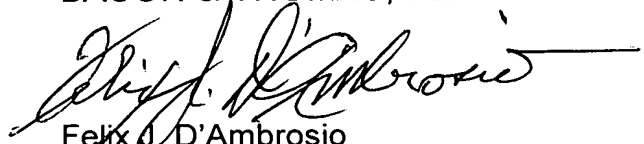
The connecting elements claimed in claim 16 do not comprise a threaded connection, and to resort to a threaded connection to suggest that patentability is lacking is to stretch the understanding of a threaded connection too far. This is not what the standard or review in the USPTO in the examination process envisions.

Also submitted herewith is a copy of the definition of straight and helical from Webster's New Encyclopedic Dictionary .

In view of the foregoing, the examiner is urged to reconsider his position and advance an allowance of claims 16 - 31 over the combination of Dreyer and Frick.

The examiner is also urged to contact the undersigned if further discussion of the issue is deemed necessary or desirable.

Respectfully submitted,  
BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to read "Felix J. D'Ambrosio", with a long horizontal line extending to the right.

Felix J. D'Ambrosio  
Registration No: 25,721

Date: August 31, 2009

**Customer Number \*23364\***  
BACON & THOMAS  
625 Slaters Lane, Fourth Floor  
Alexandria, Virginia 22314  
Phone: (703) 683-0500

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# Modular design

From Wikipedia, the free encyclopedia

In systems engineering, **modular design** — or "modularity in design" — is an approach that subdivides a system into smaller parts (modules) that can be independently created and then used in different systems to drive multiple functionalities. Besides reduction in cost (due to lesser customization, and less learning time), and flexibility in design, modularity offers other benefits such as augmentation (adding new solution by merely plugging in a new module), and exclusion. Examples of modular systems are cars, computers and high rise buildings. Earlier examples include looms, railroad signaling systems, telephone exchanges, pipe organs and electric power distribution systems. Computers use modularity to overcome changing customer demands and to make the manufacturing process more adaptive to change (see modular programming).<sup>[1]</sup> Modular design is an attempt to combine the advantages of standardization (high volume normally equals low manufacturing costs) with those of customization.

A simple example of modular design in cars is the fact that, while many cars come as a basic model, paying extra will allow for "snap in" upgrades such as a more powerful engine or seasonal tyres; these do not require any change to other units of the car such as the chassis, steering or exhaust systems.

"Characterized by: (1) Functional partitioning into discrete scalable, reusable modules consisting of isolated, self-contained functional elements; (2) Rigorous use of well-defined modular interfaces, including object-oriented descriptions of module functionality; (3) Ease of change to achieve technology transparency and, to the extent possible, make use of industry standards for key interfaces."<sup>[2]</sup>

A downside to modularity (and this depends on the extent of modularity) is that modular systems are not optimized for performance. This is usually due to the cost of putting up interfaces between modules.

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- 1 Inter-modular design
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## Inter-modular design

Recognizing that excessive inter-module dependencies are an indicator of poor software design, a system should be intended to be loosely coupled to avoid unnecessary dependencies. Thus, inter-modular design should be easy to work with because modules can be easily understood in isolation, and changes or extensions to functionality would be easily localized.

## See also

- Modular Function Deployment
- Modular programming
- Separation of concerns

## References

1. ^ Baldwin and Clark, 2000
2. ^ "Glossary (Modular Design)". Net-Centric Enterprise Solutions for Interoperability (US Government). <http://nesipublic.spawar.navy.mil/part5/releases/1.3.0/WebHelp/glossary/m.htm>. Retrieved September 2007.

## Further reading

- Erixon, O.G. and Ericsson, A., "*Controlling Design Variants*" USA: Society of Manufacturing Engineers 1999[1]ISBN 0-87263-514-7 [2]
- Clark, K.B. and Baldwin, C.Y., "*Design Rules. Vol. 1: The Power of Modularity*" Cambridge, Massachusetts: MIT Press 2000 ISBN 0262024667
- Baldwin, C.Y., Clark, K.B., "*The Option Value of Modularity in Design*" Harvard Business School, 2002 [3]
- Modularity in Design Formal Modeling & Automated Analysis
- "Modularity: upgrading to the next generation design architecture", an interview

Retrieved from "[http://en.wikipedia.org/wiki/Modular\\_design](http://en.wikipedia.org/wiki/Modular_design)"

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Hidden categories: Wikipedia articles needing context | Wikipedia introduction cleanup | All articles with unsourced statements | Articles with unsourced statements from September 2007

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# Webster's

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# New

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# Encyclopedic

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# Dictionary

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**KÖNNEMANN**

COLOGNE, GERMANY

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CIP

**store** \ˈwid\ *adj*: including all or most merchandise (a *storewide* sale)

**storied** \ˈstôr-əd, ˈstôr-\ *adj* 1: decorated with depicting scenes from story or history (a *storied* castle) 2: having an interesting history; celebrated story or history (a *storied* castle)

**storeyed** *adj*: having stories (a two-*storeyed* building)

**stork** \n: any of various large mostly Old World birds having a long stout bill and being related to cranes [Old English *storc*]

**stork-bill** \ˈstorks-bil\ *n*: any of several plants of the family with long beaked fruits

**storm** \n 1 a: a disturbance of the atmosphere accompanied by wind and usually by rain, hail, sleet, or thunder and lightning b: a heavy rain, snow, or hail c: wind having a speed of 33 kilometers per hour 2: a disturbed or agitated sudden or violent commotion 3: a sudden influx or onset 4: a heavy discharge of ob-  
jections 5: a tumultuous outburst (a *storm* of criticism) 6: a violent assault on a defended position

**storm** \v 1 a: to blow with violence b: to rain, hail, or snow heavily 2: to attack by storm (*stormed* the fort) 3: to show violent emotion (*stormed* at the delay) 4: to rush through (the mob *stormed* through the streets)

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**stout** \ˈstaut\ *adj* 1: strong of character: as a: BOLD 1a, BRAVE b: firmly resolute: STANCH 2 a: physically strong: POWERFUL b: STURDY 2a, VIGOROUS c: sturdily constructed: SOLID (*stout* boots) 3: full of energy: EXUBERANT 4: bulky in body: FAT [Old French *estout*, of Germanic origin] — **stout-ish** \ˈstaut-ish\ *adj* — **stout-ly** *adv* — **stout-ness** *n*

**stout** *n* 1: a heavy-bodied dark brew made with roasted malt and a relatively high percentage of hops 2 a: a fat person b: a clothing size for the large figure **stout-en** \ˈstaut-n\ *vb* **stout-ened**; **stout-en-ing** \ˈstaut-n-ing, -n-ing\ : to make or become stout

**stout-heart-ed** \ˈstaut-ˈhært-əd\ *adj*: BOLD 1a, BRAVE — **stout-heart-ed-ly** *adv* — **stout-heart-ed-ness** *n*

**stove** \ˈstöv\ *n* 1: an apparatus that burns fuel or uses electricity to provide heat (as for cooking or heating) 2: KILN [Dutch or Low German, "heated room"]

**stove** *past of stove*

**stove-pipe** \ˈstöv-pip\ *n* 1: a metal pipe for carrying off smoke from a stove 2: a tall silk hat

**stover** \ˈstöv-ər\ *n*: dried stalks of grain with the ears removed that are used as feed for livestock [Anglo-French *estovers* "necessary supplies", from Old French *estover* "to be necessary", from Latin *est opus* "there is need"]

**stow** \ˈstō\ *vt* 1: HOUSE 1a, LODGE 2: to put away: STORE 3 a: to dispose in an orderly fashion: ARRANGE, PACK b: to fill with cargo: LOAD 4 *slang*: to put aside: STOP — usually used in the phrase *stow it* 5: to cram in (food) — usually used with *away* [Middle English *stowen* "to place", from *stowe* "place", from Old English *stōw*]

**stow-age** \ˈstō-ij\ *n* 1 a: an act or process of stowing b: goods stowed or to be stowed 2 a: storage capacity b: a place for storage 3: STORAGE 2a

**stow-away** \ˈstō-ə-wā\ *n*: one that stows away

**stow away** \ˈstō-ə-wā, ˈstō-ə-\ *vt*: to conceal oneself aboard a vehicle as a way to obtain transportation

**STP** \ˌes-,tē-ˈpē\ *n*: a powerful hallucinogenic drug that is chemically related to amphetamine [from *STP*, a trademark for a motor fuel additive]

**strabismus** \ˈstrə-biz-məs\ *n*: an eye disorder in which the two eyes cannot be directed to the same point because of a fault of the muscles of the eyeball [Greek *strabismos* "condition of squinting", from *strabizein* "to squint", from *strabos* "squint-eyed"] — **strabismic** \-mɪk\ *adj*

**straddle** \ˈstrad-dl\ *vb* **strad-dled**; **strad-dling** \ˈstrad-ling, -l-ing\ 1: to part the legs wide: stand, sit, or walk with the legs wide apart 2: to stand, sit, or be astride of (*straddle* a horse) 3: SPRAWL 3 4: to be noncommittal: favor or seem to favor two apparently opposite sides (*straddle* an issue) [derived from *stride*] — **strad-dler** \ˈstrad-ler, -l-ər\ *n*

**straddle** *n* 1: the act or position of one that straddles 2: a noncommittal or uncertain position

**strafe** \ˈsträf\ *vt*: to fire on (as troops) at close range and especially with machine guns from low-flying airplanes [German *Gott strafe England* "God punish England", slogan of the Germans in World War I] — **straf-er** *n*

**strag-gle** \ˈstrag-əl\ *vt* **strag-gled**; **strag-gling** \ˈstrag-ling, -ə-ling\ 1: to wander from a direct course or way: ROVE, STRAY 2: to trail off from others of its kind: spread out irregularly [Middle English *straglen*] — **strag-gler** \-lər, -ə-lər\ *n*

**strag-gly** \ˈstrag-lē, -ə-lē\ *adj* **strag-gli-er**; -est: spread out or scattered irregularly (a *straggly* beard)

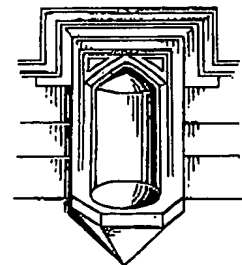
**straight** \ˈstræt\ *adj* 1 a: free from curves, bends, angles, or irregularities (*straight* hair) (*straight* timber) b: generated by a point moving continuously in the same direction (a *straight* line) 2: DIRECT, UNINTER-  
RUPTED: as a: lying along or holding to a direct or proper course or method (a *straight* thinker) b: CANDID, FRANK (a *straight* answer) c: coming directly

**storewide-  
straight**

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\ər\	further	\u\	bone
\ə\	mar	\v\	saw
\ə\	take	\ɔɪ\	coin
\ə\	cot, cart	\ɪh\	thin
\ə\	out	\ɪh\	this
\h\	chin	\u\	food
\e\	pet	\u\	foot
\e\	easy	\y\	yet
\g\	go	\yū\	few
\i\	tip	\yū\	cure
\i\	life	\zh\	vision
\j\	job		



# -hedral- heliotope

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**-he-dral** \hē-drəl\ *adj* combining form : having (such) a surface or (such or so many) surfaces (*dihedral*) [Greek *hedra* "seat"]

**-he-dron** \hē-drən\ *n* combining form, *pl* -hedrons or -he-dra \-drə\ : crystal or geometric figure having a (specified) form or number of surfaces (*rhombodron*) [Greek *hedra* "seat"]

**hee-ble-jee-bles** \hē-bē-'jē-bēz\ *n* *pl* : JITTERA, WILLERS [coined by Billy DeBeck, died 1942, American cartoonist]

**heed** \hēd\ *vb* 1 : to pay attention 2 : to concern oneself with : MIND [Old English *bēdan*]

**heed** *n* : ATTENTION 1, NOTICE (give *heed* to my words)

**heed-ful** \hēd-fəl\ *adj* : taking heed (*heedful* of the rights of others) — *heed-ful-ly* \-fə-lē\ *adv* — *heed-ful-ness* *n*

**heed-less** \-ləs\ *adj* : not taking heed : INATTENTIVE (*heedless* of danger) — *heed-less-ly* *adv* — *heed-less-ness* *n*

**hee-haw** \hē-'hō\ *n* 1 : the bray of a donkey 2 : a loud rude laugh : GUFFAW [imitative] — *hee-haw* *vt*

**heel** \hēl\ *n* 1 a : the back part of the human foot behind the arch and below the ankle; also : the corresponding part of a lower vertebrate b : the part of the palm of the hand nearest the wrist 2 a : a part (as of a shoe) that covers the human heel b : a solid attachment of a shoe or boot forming the back of the sole under the heel of the foot 3 : something resembling a heel in form, function, or position : as a (1) : one of the crusty ends of a loaf of bread (2) : one of the rind ends of a cheese b (1) : the after end of a ship's keel (2) : the lower end of a mast c : the base of a tuber or cutting of a plant used for propagation d : the base of a ladder 4 : a contemptible person [Old English *hēla*] — *heeled* \hēld\ *adj* — *heel-less* \hēl-ləs\ *adj* — *on the heels* of : immediately following — *to heel* 1 : close behind 2 : into agreement or into line

**heel** *vt* 1 : to furnish with a heel 2 : to supply especially with money (a well-*heeled* customer) 3 : to follow closely (a dog *heeling* his master) — *heel-er* *n*

**heel** *vb* : to tilt or cause to tilt to one side : *tip* (a boat *heeling* badly) [Old English *hieldan*]

**heel** *n* : a tilt to one side

**heel-and-toe** \hē-lən-'tō\ *adj* : marked by a stride in which the heel of one foot touches the ground before the toe of the other foot leaves it (a *heel-and-toe* walking race)

**heel-tap** \hēl-'təp\ *n* 1 : a lift for the heel of a shoe 2 : a small quantity of liquor remaining (as in a glass after drinking)

**heft** \heft\ *n* : physical or figurative weight [derived from *heave*]

**heft** *vt* 1 : to heave up : HOIST 2 : to test the weight of by lifting

**hefty** \hef-tē\ *adj* *heft-i-er*; -est 1 : quite heavy 2 a : marked by bigness, bulk, and usually strength b : POWERFUL, MIGHTY c : impressively large : SUBSTANTIAL — *heft-i-ly* \-tē-lē\ *adv* — *heft-i-ness* \-tē-nəs\ *n*

**he-gem-o-ny** \hi-'jēm-ə-nē, 'hej-ə-'mō-nē\ *n* : dominant influence or authority especially of one nation over others [Greek *hēgemonia*, from *hēgēmōn* "leader", from *hēgethai* "to lead"]

**he-gi-ra** or **he-ji-ra** \hi-'jī-rā, 'hej-ə-rā\ *n* : a journey especially when undertaken to seek refuge away from a dangerous or undesirable environment [the *Hegira*, flight of Muhammad from Mecca in A.D. 622, from Medieval Latin, from Arabic *hijrah*, literally, "flight"]

**heifer** \hef-ər\ *n* : a young cow; esp : one that has not had a calf [Old English *hēahfor*]

**heigh-ho** \hi-'hō, 'hā-\ *interj* — used typically to express boredom, weariness, or sadness or sometimes as a cry of encouragement

**height** \hīt, 'hīt\ *n* 1 a : the highest part : SUMMIT b : the highest or most advanced point or level (the *height* of stupidity) 2 a : the distance from the bottom to the

top of something standing upright b : the extent of elevation above a level : ALTITUDE 3 : the condition of being tall or high 4 a : an extent of land rising to a considerable degree above the surrounding country b : a high point or position [Old English *hēhtbu*] □

**SYN** ELEVATION, ALTITUDE : HEIGHT refers to something measured vertically whether high or low (a wall 2 meters in *height*) (lettering not more than one centimeter in *height*) ELEVATION and ALTITUDE suggest reckoning of height by angular measurement or atmospheric pressure; ALTITUDE is preferable when referring to vertical distance above the surface of the earth or above sea level and ELEVATION is used especially in reference to vertical height on land (fly at an *altitude* of 10,000 meters) (Mexico City has a high *elevation*)

**height-en** \hīt-n\ *vb* *height-ened*; *height-en-ing* \hīt-nīng, -n-īng\ 1 a : to increase the amount or degree of : AUGMENT (*heightened* the citizens' awareness) b : to make or become brighter or more intense : DEEPEN (excitement *heightened* the pinkness of their cheeks) c : to bring out more strongly : point up (*heighten* a contrast) 2 a : to raise high or higher : ELEVATE b : to raise above the ordinary or trite **SYN** see INTENSIFY

**hel-nous** \hē-'nās\ *adj* : hatefully or shockingly evil : ABOMINABLE [Middle French *haineus*, from *haine* "hate", from *hair* "to hate", of Germanic origin] **SYN** see OUTRAGEOUS — *hel-nous-ly* *adv* — *hel-nous-ness* *n*

**heir** \hēr, 'ēr\ *n* 1 : a person who inherits or is entitled to inherit property 2 : a person who has legal claim to a title or a throne when the person holding it dies [Old French, from Latin *heres*] — *heir-ship* \-ship\ *n*

**heir apparent** *n*, *pl* *heirs apparent* : an heir who cannot legally be deprived of the right to succeed (as to a throne or a title)

**heir-ess** \hēr-əs, 'ēr-\ *n* : a woman who is an heir; also : one who is wealthy through inheritance

**heir-loom** \hēr-'lūm, 'ēr-\ *n* : a piece of personal property handed down by inheritance for several generations [Middle English *heirloom*, from *heir* + *loom* "implement"]

**heir presumptive** *n*, *pl* *heirs presumptive* : an heir whose present right to inherit could be lost through the birth of a nearer relative

**heist** \hīst\ *vt* 1 chiefly *dialect* : HOIST 2 *slang* a : to commit armed robbery on b : STEAL 2a [alteration of *hoist*]

**heist** *n*, *slang* : armed robbery : HOLDUP; also : THEFT

**held** *past* of **HOLD**

**heli-** or **heli-** combining form : sun (*heliocentric*)

[Greek *hēlios*]

**heli-** or **helico-** combining form : helix : spiral

(*helic*) [Greek *hēlik-*, *hēlix* "spiral"]

**heli-cal** \hē-lī-kəl, 'hē-lī-\ *adj* : of, relating to, or having the form of a helix; also : SPIRAL 1 — *heli-cal-ly* \-kə-lē, -klē\ *adv*

**heli-con** \hē-lē-kən, -lī-kən\ *n* : a large circular brass tube used in military bands [probably derived from Greek *hēlix* "spiral"]

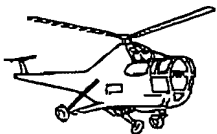
**heli-cop-ter** \hē-lē-'kōp-tər, 'hē-lē-\ *n* : an aircraft that is supported in the air by propellers revolving on a vertical axis [French *hélicoptère*, from Greek *hēlix* "helix" + *pteron* "wing"]

**heli-cop-ter** *vb* : to travel or transport by helicopter

**heli-o-cen-tric** \hē-lē-ō-'sen-trik\ *adj* 1 : referred to or measured from the sun's center or appearing as if seen from it (a *heliocentric* position) 2 : having or relating to the sun as a center (a *heliocentric* theory of the solar system) — compare **GEOCENTRIC**

**heli-graph** \hē-lē-ō-'grāf\ *n* : an apparatus for signaling by means of the sun's rays reflected from a mirror — *heliograph* *vb*

**heli-trope** \hē-lē-yə-'trōp\ *n* 1 : any of a genus of herbs or shrubs related to the forget-me-not — compare **GARDEN HELIOTROPE** 2 : BLOODSTONE 3 a : a mod-



helicopter

eratic purple **b** : a moderate reddish purple [Latin *heliotropium*, from Greek *hēliotropion*, from *hēlios* "sun" + *tropos* "turn"; from its flowers turning toward the sun]

**helio-tro-pism** \hē-lē-ō-trō-piz-əm/ *n* : phototropism in which sunlight is the orienting stimulus — **helio-tropic** \hē-lē-ō-trōp-ik, -trōp-/ *adj*

**helio-port** \hē-lē-ō-pōrt, -hē-lē-ō-, -pōrt/ *n* : a landing and takeoff place for a helicopter

**helio-lum** \hē-lē-əm/ *n* : a light colorless nonflammable gaseous chemical element found in various natural gases — see **ELEMENT** table [New Latin, from Greek *hēlios* "sun"; from its first being observed in the sun's atmosphere]

**helix** \hē-lik/ *n*, *pl* **helices** \hē-lē-sēz, -hē-lē-/ *also* **helix-es** \hē-lik-səz/ 1 : something (as a wire coiled around a cylinder, a cone-shaped wire spring, or a corkscrew) spiral in form 2 : the incurved rim of the external ear 3 : a curve traced on a cylinder by a point moving at a constant angle to the straight lines parallel to the axis and lying in the surface; *also* : **SPiral**, 1b [Latin, from Greek]

**hell** \hēl/ *n* 1 : a nether world in which the dead are held to continue to exist : **Hades** 2 : a place or state of punishment for the wicked after death : the home of evil spirits 3 : a place or condition of misery or wickedness 4 : something that causes torment; *esp* : a severe scolding [Old English]

**he'll** \hēl, hēl, hēl, ēl, il/ *he shall* : *he will*

**hell-ben-der** \hēl-ben-dər/ *n* : a large aquatic salamander of the Ohio valley

**hell-bent** \-bent/ *adj* 1 : stubbornly and often recklessly determined 2 : moving at full speed

**hell-cat** \-kat/ *n* : a violently temperamental person; *esp* : **SURUW** 2

**hel-le-bore** \hē-lē-bōr, -bōr/ *n* 1 *a* : any of a genus of herbs of the buttercup family *b* : the dried root of a hellebore formerly used in medicine 2 : a poisonous herb of the lily family; *also* : its dried root or a product of this containing alkaloids used in medicine and insecticides [Latin *helleborus*, from Greek *helleboros*]

**Hel-lene** \hē-lē-nē/ *n* : **GREEK** 1 [Greek *Hellen*] — **Hel-len-ic** \hē-lē-nik, hē-/ *adj*

**Hel-le-nism** \hē-lē-niz-əm/ *n* 1 : devotion to or imitation of especially ancient Greek thought, customs, or styles 2 : Greek civilization 3 : a body of humanistic and classical ideals associated with ancient Greece

**Hel-le-nist** \-nist/ *n* 1 : a person living in Hellenistic times Greek in language, outlook, and way of life but not in ancestry; *esp* : a hellenized Jew 2 : a specialist in the language or culture of ancient Greece

**Hel-le-nis-tic** \hē-lē-nis-tik/ *adj* 1 : of or relating to the cosmopolitan culture with blended Greek and eastern elements that followed the conquests of Alexander the Great 2 : of or relating to the Hellenists — **Hel-le-nis-ti-cal-ly** \-ti-kə-lē-, -klē-/ *adv*

**hel-le-nize** \hē-lē-nīz/ *vb*, *often cap* : to make or become Greek or Hellenistic in form or culture — **hel-le-ni-za-tion** \hē-lē-nə-zā-shən/ *n*, *often cap*

**hell-er** \hēl-ər/ *n*, *chiefly dialect* : **HELLION**

**hell-lerl** \hēl-ər-lē-, -rē-/ *n* : a brightly colored hybrid tropical fish [C. Heller, 20th century tropical fish collector]

**hell-gram-mite** \hēl-grā-mīt/ *n* : the aquatic larva of a dobsonfly much used as fish bait [origin unknown]

**hel-lion** \hēl-yən/ *n* : a troublesome or mischievous person [probably from earlier *ballion* "scamp"]

**hell-ish** \hēl-ish/ *adj* : of, resembling, or befitting hell : **DEVILISH** — **hell-ish-ly** *adv* — **hell-ish-ness** *n*

**hel-lo** \hə-'lō, hē-/ *n*, *pl* **hellos** : an expression or gesture of greeting — used interjectionally in greeting, in answering the telephone, or to express surprise [alteration of *hollo*]

**helm** \hēlm/ *n* : **HELMET** 1 [Old English]

**helm** *vt* : to cover or furnish with a helmet

**helm** *n* 1 : a lever or wheel controlling the rudder of a ship for steering; *also* : the entire apparatus for steering a ship 2 : a position of control (at the *helm* of the business) [Old English *helma*]

**hel-met** \hēl-mət/ *n* 1 : a covering or enclosing headpiece of ancient or medieval armor 2 : any of various protective head coverings usually made of a hard material to resist impact 3 : something resembling a helmet [Middle French, from *helme* "helmet", of Germanic origin] — **hel-met-like** \-,līk/ *adj*

**hel-minth** \hēl-,minth, -minth/ *n* : a parasitic worm; *esp* : an intestinal worm (as a tapeworm) [Greek *helminthos*, *helmis*] — **hel-min-thic** \hēl-'min-thik, -'mint-/ *adj*

**hel-min-thi-a-sis** \hēl-'min-'thē-ə-sēs/ *n* : infestation with or disease caused by parasitic worms

**hel-min-thol-o-gy** \-thāl-ə-jē/ *n* : a branch of zoology concerned with the study of parasitic worms

**helms-man** \hēlmz-mən/ *n* : the person at the helm : **STEERSMAN**

**hel-ot** \hēl-ət/ *n* 1 *cap* : a member of a class of serfs of ancient Sparta 2 : **SLAVE** 1 [Latin *Helotes*, pl., from Greek *Hellōtes*] — **hel-ot-ism** \hēl-ət-'iz-əm/ *n* — **hel-ot-ry** \-ə-trē-/ *n*

**help** \hēlp, South *also* 'hep/ *vb* 1 : to give aid or assistance (*help* a child with a lesson) 2 *a* : **REMEDY**, **RELIEF** (first *helps* a cold) *b* : to get (oneself) out of a difficulty (you must learn to *help* yourself) 3 : to further the advancement of : **PROMOTE** (*helping* industrial development with loans) 4 *a* : to change for the better (learn to live with what you can't *help*) *b* : to refrain from (couldn't *help* laughing) *c* : to keep from occurring : **PREVENT** (they couldn't *help* the accident) 5 : to serve with food or drink especially at a meal — often used with *to* 6 : to appropriate for the use of (oneself) [Old English *helpan*] — **cannot help but** : cannot but — **so help me** : on my word : believe it or not

**help** *n* 1 : an act or instance of helping : **AID**, **ASSISTANCE** (give *help*) 2 : the state of being helped : **RELIEF** (a situation beyond *help*) 3 : a person or a thing that helps (a *help* in time of trouble) 4 : a hired helper or a body of hired helpers (hire additional *help* in a business)

**help-er** \hēl-pər/ *n* : one that helps; *esp* : a relatively unskilled worker who assists a skilled worker usually by manual labor

**helper T cell** *n* : a T cell that participates in an immune response by recognizing a foreign antigen and secreting substances promoting lymphocyte proliferation, that carries molecular markers on its surface to which HIV attaches, and that is reduced to 20 percent or less of normal numbers in AIDS — called also **helper cell**

**help-ful** \hēlp-fəl/ *adj* : furnishing help (a *helpful* friend) (a *helpful* book) — **help-ful-ly** \-fə-lē/ *adv* — **help-ful-ness** *n*

**help-ing** \hēl-ping/ *n* : a portion of food : **SERVING**

**helping verb** *n* : an auxiliary verb

**help-less** \hēl-pləs/ *adj* 1 : lacking protection or support : **DEFENSELESS** 2 : lacking strength or effectiveness : **POWERLESS** (was *helpless* to prevent them from going) — **help-less-ly** *adv* — **help-less-ness** *n*

**help-mate** \hēlp-māt/ *n* : one that is a companion and helper [by folk etymology from *helpmeet*]

**help-meet** \-mēt/ *n* : **HELMATE** [*help* + *meet*, *adj.*]

**hel-ter-skel-ter** \hēl-tər-'skel-tər/ *adv* 1 : in headlong disorder : **PEL-MELL** 2 : in random order : **HAZARDILY** [perhaps from Middle English *skelten* "to come, go"]

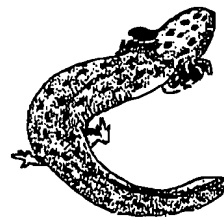
**helter-skelter** *n* : a disorderly confusion : **TURMOIL**

**helter-skelter** *adj* 1 : confusedly hurried : **PRECIPITATE** (*helter-skelter* rush-hour traffic) 2 : **HIT-OR-MISS**, **HAZARD** (does things in a *helter-skelter* manner)

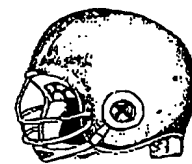
**helve** \hēlv/ *n* : a handle of a tool or weapon : **HAFT** [Old English *helfe*]

## heliotropism—helve

465



hellbender



helmet 2

abut	sing
further	bone
mar	saw
take	coin
cot, cart	thin
our	this
chin	food
pet	foot
easy	yet
go	few
tip	carc
life	vision
job	